New Abstract

This new Abstract replaces that filed with the original application. No new matter has been introduced in this replacement Abstract.

Abstract

Chromatographic separations are often characterized by multiple detectors through which the sample flows serially. As the sample flows between detectors, it becomes progressively diluted due to mixing and diffusion. This phenomenon is traditionally called interdetector "band broadening" and often results in significant distortion of the sample's derived physical properties such as molar mass. A method to characterize the broadening present in a chromatographic system, and an algorithm whereby the narrow peaks of the upstream detector are numerically broadened so they can be compared to the broadened peaks of the downstream detector, is described. Although the technique results in some loss of resolution, its stability and generality allow it a broad range of application. Examples are presented for data collected by dRI, MALS, UV, and viscometric detectors.